

not properly rejected under 35 U.S.C. §103 because the Office Action fails to establish a *prima facie* case of obviousness as discussed below.

In rejecting claim 18, the Examiner asserts that it would have been obvious to one skilled in the art to modify Terada to include the teachings of Toyama "for reading less number of pixels per row via gate to enable autofocusing with less loaded data for a fast follow-up autofocusing fashion." However, as stated in §2143.01 of the M.P.E.P. "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). In the present case, the Examiner states that it would have been obvious to modify Terada to achieve functionality disclosed in Toyama. However, the Examiner fails to provide any evidence of the desirability of adding the disclosed functionality. More specifically, the Office Action relies upon Terada for its disclosure of two modes of operation, namely still mode and motion mode. In contrast, the referenced portion of Toyama (col. 7, lines 28-42) relates to a focus detection mode. The Examiner fails to provide any evidence of the desirability of modifying the image pickup apparatus of Terada to include follow-up gate processing as disclosed by Toyama.

Furthermore, even if, *arguendo*, one skilled in the art were motivated to combine Terada and Toyama, the combination would still fail to render claims 18, 19, 24, 25 and 30-33 unpatentable because the combination fails to disclose or suggest each and every claimed element as discussed below.

Independent claim 18 defines a digital camera. The camera includes, *inter alia*, an image sensor for converting a subject image into an electrical signal on a plurality of pixels to obtain a captured image and a control unit for reading out the electrical signal from said image sensor in accordance with a pixel pattern, the pixel pattern being different among first and second operations. In addition, the second operation is an auto focusing operation to obtain focus in accordance with a second pixel pattern having a predetermined area with a higher density of pixels to be read than the other areas of the second pattern.

Terada discloses an image pickup apparatus comprising multiple reading or driving modes. The driving modes include, block, skip and whole pixel. However, as correctly noted by the Examiner, Terada fails to disclose that the second operation is an auto focusing operation in which the second pixel pattern has a predetermined area having a higher density of pixels to be read than the other areas of the second pattern. Rather, as noted above, the second operation of Terada is a video or motion display mode.

Toyama discloses a device for following a moving subject when capturing NTSC images. More specifically, the device of Toyama includes a setting circuit for setting a follow-up field; and extracting circuit for extracting and storing a feature of an object in relation to the follow-up field; a detecting circuit for detecting a relative shift between the object and the device based on the currently extracted feature and the stored extracted feature, and a shifting circuit for shifting the follow-up field according to the relative shift of the object. However, Toyama fails to overcome the deficiencies of Terada.

In rejecting claim 18, the Examiner asserts that Toyama discloses a second pattern as claimed inasmuch as Toyama allegedly discloses a follow-up gate used for auto focusing. This assertion is unfounded for the following reasons.

First, the follow-up field or gate of Toyama is not used for auto focusing per se as suggested by the Examiner. As discussed in Toyama at column 7, lines 33-39, the follow-up gate is used to determine the relative shift between a feature of the object and the device. Although the auto focusing feature of Toyama adjusts according to changes in the field measurements and/or device shifts which are determined based on the follow-up gate, the pattern extracted from the follow-up gate is not used in the auto focusing function.

Second, the mere fact that the follow-up field is smaller than the full NTSC image does not in and of itself establish that the pattern of the follow-up field has a predetermined area with higher density of pixels to be read than other areas within the field as claimed.

Since both Terada and Toyama fail to disclose or suggest a digital camera that includes a control circuit for reading out an electrical signal from an image sensor in accordance with pixel patterns as claimed, the combination of these two references cannot possibly disclose or suggest said feature. Therefore, even if one skilled in the art were motivated to combine Terada and Toyama, the combination would still fail to render claim 18 unpatentable for at least the reason that the combination fails to disclose or suggest each and every claimed element.

Independent claim 24 defines a method of controlling a digital camera. The method includes, *inter alia*, the step of selecting a pixel pattern adapted for

calculation of a focusing position, wherein the pixel pattern has a predetermined area having a higher density of pixels to be read than the other areas of the pattern.

Accordingly, independent claim 24 is patentably distinguishable over the combination of Terada and Toyama for at least those reasons presented above with respect to claim 18.

Independent claims 30 and 31 define a digital camera and method of controlling a digital camera, respectively. The camera includes, *inter alia*, an image sensor for converting a subject image into an electrical signal, a controller for selecting pixels to be read in accordance with selected pixel patterns, and a pattern selector for selecting a first pixel pattern in accordance with a recording operation, a second pattern having a smaller number of pixels than said first pattern in accordance with an auto focusing operation, and a third pixel pattern having a smaller number of pixels to read than said second pattern.

Although the combination of Terada and Toyama may arguably disclose an image capturing device that includes a follow-up field which is smaller than the full image capturing field, the combination fails to disclose a pattern selector as recited in claim 30. More specifically, the combination fails to disclose a pattern selector which selects first, second and third patterns in accordance with a recording operation, an auto focus operation, and a display operation, respectively, as recited in claims 30 and 31.

Independent claims 32 and 33 define a digital camera and method of controlling same. The camera includes, *inter alia*, an image sensor for converting a subject image into an electrical signal; a control circuit for selecting pixels to be read

out in accordance with selected pixel patterns, and a pattern selector for selecting a first pixel pattern in accordance with a recording operation and a second pixel pattern in accordance with an auto focusing operation, wherein a part of the second pattern has the same pixel density as the first pixel pattern.

Claims 32 and 33 are patentably distinguishable over the combination of Terada and Toyama for at least the reason that the combination fails to disclose or suggest that a part of the second pattern has the same pixel density than the first pattern. (See discussion above with respect to claim 18).

Claims 19 and 25 depend from independent claims 18 and 24. Therefore claims 19 and 25 are patentably distinguishable over the combination of Terada and Toyama for at least those reasons presented above with respect to claims 18 and 24.

For at least those reasons presented above, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 18, 19, 24, 25 and 30-33 under 35 U.S.C. §103(a).

The application is in condition for allowance, and a notice to that effect is earnestly solicited. Should the Examiner have any questions about this application, the Examiner is invited to call the undersigned at the telephone number provided below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: June 14, 2004

By:



---

James A. LaBarre  
Registration No. 28,632

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620